REMARKS

Applicants respectfully request reconsideration of this application as amended. Claims 1, 2, 4, 6, 8, 12, 14, 15, 17, 19, 21, 25, 27, 29 and 31-34 are pending in the application. Claims 1, 14, 31, 32, 33 and 34 have been amended. No claims have been cancelled. No claims have been added.

The Examiner has indicated that claims 12 and 25 are in condition for allowance. Applicant thanks the Examiner and respectfully submits that the remaining comments are directed toward the other pending claims.

The Examiner rejected claims 31 and 32 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claims 31 and 32 to more concisely set forth the present invention. Accordingly, Applicant respectfully submits that the rejection under 35 U.S.C. § 112, second paragraph, has been overcome by the amendments and the remarks. Applicant submits that claims 31 and 32 as amended are now in condition for allowance and such action is earnestly solicited.

The Examiner rejected claims 1, 2, 4, 6, 8, 12, 14, 15, 17, 19, 21, 27, 29, 33 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Yi (U.S. 6,778,187) in view of Meyers et al, (U.S. 6,486,889). Applicant respectfully disagrees.

The present invention as claimed sets forth a second unit system having a higher resolution level for a second color space based on three primary colors of light, a first unit system having a lower resolution level for a first color space other than the second color space, where the first unit system having the lower resolution is used as a common base unit system between color spaces of the first unit system and the second unit system, and where an integer operation can be realized for a forward transformation and a backward transformation (reversed conversion).

In this way, with the present invention as claimed, even if for both the forward transformation and the backward transformation between RGB and YCbCr, a standard conversion in the technical field is used as a basic conversion, a difference between RGB and YCbCr can be overcome.

In contrast, according to lines 25-32 of column 2 cited by the Examiner, Yi discloses that since a color component being represented by each of pixels in an image is formed by a plurality of bits, the color component is divided by 2^n (n: a count of right shifting) by performing a right shifting and is simultaneously compressed. The color component being compressed by the right shifting is uncompressed by performing the left shifting. As a bit shift example of compressing and uncompressing:

Red: 8 bits to 5 bits,
Green: 8 bits to 5 bits,
Blue: 8 bits to 4 bits, and
Special Attribute (other attributes of a pixel): 2 bits.

Accordingly, Yi does not disclose the limitations set forth above in the present invention as claimed. That is, the present invention as claimed performs a calculation with any positive integer without limiting a 2^n and to uncompressed data. In addition, the method of the present invention as claimed can be applied to a mutual color conversion (RGB $\Leftrightarrow$ YCbCr). However, the bit shifting of Yi cannot realize a reversible color conversion (RGB $\Leftrightarrow$ YCbCr).

Meyers describes a problem associated with color information that is in numerous different formats that are dependent on devices such as cathode ray tube monitors, televisions, scanners, digital cameras and printers, and thus, color information communicated to a certain device may not be in the appropriate format to be utilized by that device ("Description of Related Art"). Meyers describes an integration of data conversion methods in order to solve the above problem. That is, Meyers believes it is desirable to enable a common format of color information and a device for

converting the color information from YCbCr into RGB, for example. In this common format and this device, a special conversion using a look-up table is applied to a portion, which is not linearly converted (non-linear) and to which a γ correction is performed.

Accordingly, in Meyers, an error correction using a mathematical formula is not conducted to both a linear portion and a non-linear portion in the color information. Meyers simply discloses a conversion for the non-linear portion such as the γ correction for correcting a difference between devices.

The present invention as claimed sets forth a second unit system having a higher resolution level for a second color space based on three primary colors of light, a first unit system having a lower resolution level for a first color space other than the second color space, where the first unit system having the lower resolution is used as a common base unit system between color spaces of the first unit system and the second unit system, and where an integer operation can be realized for a forward transformation and a backward transformation (reversed conversion).

Thus, Yi and Meyers do not set forth all the limitations of the claims and do not disclose how to overcome the difference between RGB and YCbCr. Thus, Applicant respectfully submits that the present invention as claimed is patentable over a combination of Yi and Meyers.

Accordingly, Applicant respectfully submits that the rejection under 35 U.S.C. § 103(a) has been overcome by the remarks. Applicant submits that claims 1, 2, 4, 6, 8, 14, 15, 17, 19, 21, 27, 29 and 31-34 as amended are now in condition for allowance and such action is earnestly solicited.

Accordingly, Applicants respectfully submit that the objections to the claims and the abstract have been overcome by the amendments and the remarks and withdrawal of these rejections is respectfully requested. Applicants submit that Claims 1, 2, 4, 6, 8, 12, 14, 15, 17, 19,

21, 25, 27, 29 and 31-34 as amended are in condition for allowance and such action is earnestly solicited.

If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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